



1968

The Sound of Marantz

*The Sound of Marantz  
is the compelling warmth of a Stradivarius.  
It is a dancing flute, a haughty bassoon  
and the plaintive call of a lone French horn.  
The sound of Marantz is the sound of beauty,  
and Marantz equipment is designed to bring you  
the subtle joy of its delight.  
Wonderful adventures in sound await you  
when you discover that the sound of Marantz  
is the sound of music at its very best.*







**The Model 7T Solid-State Stereo Preamplifier.** Versatility is not the only standard for judging components, but if it were, the Marantz 7T Stereo Solid-State Preamplifier would still be the leader. There is, however, an even more important standard: sound quality. When you hear the ravishingly brilliant stereophonic sound that this instrument can produce, then you will know why it stands in a class by itself. Here is the preamplifier that possesses unsurpassed specifications for low noise and low distortion. The widest dynamic excursions on your favorite record or tape cannot overload the input stage. The usual transistor problem in solid-state preamplifiers—that of inadequate signal handling capacity and dynamic range—has now been overcome by Marantz engineering. But to appreciate truly this marvel of audio engineering, you must see it, and hear it. You must feel and turn the smooth precision-machined knobs, savor the luxurious look of the classic front panel design, examine closely the wear-ever deep photo-etched front panel lettering, appreciate Marantz' traditional scrupulous attention to the minutest detail as evidenced by the design of the balance control which simultaneously increases the volume of the speaker of one channel while decreasing the other to maintain constant acoustic output, and by the use of Teflon-insulated solder terminals. In this preamplifier, sound and science merge, and the result is as *Electronics World* magazine put it, "...we have never found a unit which embodied all the performance characteristics of the Model 7T." Here are some of the many switching and input facilities available with the 7T. Two front panel jacks let you record, play back or copy with an external tape recorder. There's a jack for stereo headphone (600 ohms and above) that automatically cuts off the speakers when the headphones are plugged in. Each stereo channel has its own separate bass and treble tone knobs. There is an input selector knob for microphone, up to two phonographs, tape head, tuner, TV, and two AUX inputs. You can operate two additional amplifiers for remote monophonic speakers through the separate center channel output which has its own level control, and which provides a total blending of the two stereo channels. Small wonder that the Model 7T is hailed as the supremely versatile, all-purpose stereo preamplifier. \$325.00.

## FEATURES

**Two Front Panel Stereo Jacks**—For recording, copying or playback with an external tape recorder.

**Front Panel Stereo Headphone Jack**—Built-in circuit for driving 600 ohm or higher impedance phones. Sound automatically cuts off from speakers when headphones are plugged in.

**Center Channel Output**—Separate A+B mixing circuit with level control to drive one or two additional amplifiers for "center" channel or remote monophonic speakers. Low impedance output.

**Tape Play/Tape Copy Switch**—New circuit and switching permits tape recording playback or monitoring, plus duplication

of tapes with front panel and rear panel recording outputs. They are capable of driving either low or high impedance recorders with low distortion. Stereo program material can be mixed and recorded monophonically if desired.

**Other Features**—Front: 3-way Selector Switch—RIAA, plus two of the more common older equalization curves; Mode Switch; Precision Tracking Volume Control; Wide-range Balance Control; Selectable curve Feedback Tone Controls; 3-position High (scratch) Filter; 3-position Low (rumble) Filter; Power Switch. Rear: Output Level Switch for High and Low Efficiency Speakers; Tape Head Equalizer

Adjustment; 6 AC Outlets; Tape Recorder Output Jacks; Tape Playback Input Jacks; Oscilloscope Output (For use with Marantz tuners).

## SPECIFICATIONS

**Gain**—Phono to main output: 63.5 db; Phono to recording output: 42 db; High level to main output: 21.5 db.

**Input Sensitivity**—.7 mv for phono for 1V main output; less than .1V for high level for 1V main output.

**Frequency Response**—20 Hz to 20 KHz $\pm$ 0.5 db.

**Total Noise**—(High Level). 20 Hz to 20 KHz, 100 db below 1 microvolt input; (Low Level) 20 Hz to 20 KHz, 1 mv equivalent (phono).

**I.M. Distortion**—Less than 0.05% at 3 Volt RMS equivalent peak output. Less than 0.05% at 10 Volt RMS equivalent peak output. Less than 0.15% at 10 Volt RMS equivalent output.

**Harmonic Distortion**—20 Hz to 20 KHz; Less than 0.05% at 1V RMS output.

**Dynamic Range**—(Phono Input)—100 db above 1  $\mu$ V equivalent noise input.

**Optional Accessories**—Oiled walnut cabinet, \$24.50; Rack Mount Panel, \$40.00.

**UL Listed**—50 to 60 Hz operation at 105-130 Volts.

**Easily Convertible**—From 110 Volt to 220 Volt operation. Please write for conversion instructions.

**Marantz Model 7-T**







**The Model 15 120-watt Solid-State Stereo Power Amplifier.** Critics, lab tests, dealers and customers agree: the Marantz Model 15 120-watt Solid-State Stereo Power Amplifier is an instrument without precedent in performance and rugged reliability. As renowned audio authority Julian Hirsch exclaimed, "If any amplifier can be termed 'indestructible,' this is the one." Two independent and identical monophonic amplifiers, each with its own power supply, are bracketed together and mounted to a handsome gold anodized front panel that matches both the Model 7T Preamplifier and Model 10B Tuner. Because the channels are completely isolated, you suffer no power loss, "cross-talk," or other interactions that oftentimes occur from simultaneous operation of both channels with only one power supply. The amplifiers are direct-coupled, providing instantaneous recovery from overload and *full* rated power throughout the full frequency range. At any audio frequency, and on any output impedance from 4 to 16 ohms, the Model 15 is guaranteed to have no more than 0.1% total harmonic distortion at or below rated power. Distortion on the Model 15 is lower than on any other currently available power amplifier. You can use the Model 15 with any loudspeaker on the market, from a 4-ohm acoustic suspension system to the 16-ohm electrostatic. And, a built-in fool-proof protection circuit gives instantaneous and unobtrusive protection without causing annoying program interruptions. All of these features combine to bring you completely reliable operation — year in and year out. The performance of the Marantz Model 15 establishes wholly new standards of technical excellence for amplifiers of all types. \$395.00.

**The Model 14 Single Channel Amplifier.** If you need a high-quality amplifier for monophonic or center-channel operation, then the Model 14 is the ideal choice. Available in utility form, it has the same performance specifications and circuitry of each channel of the Model 15. \$200.00.

#### FEATURES

**Safety Circuit**—A new, current-limiting circuit developed by Marantz protects both output and driver transistors from output short circuits, open circuits, capacitive loads or any type of complex reactive loudspeaker loading. Accidental open — or short-circuiting, even with full-power, 20,000 Hz output is completely safe. Short circuits during operation activate a visual indicator. This unique safety circuit gives instantaneous and unobtrusive protection *without causing annoying program interruptions!*

**Overload Recovery** — Instantaneous. Clean performance at high peak-clipping levels.

#### Time Delay Circuit —

Loudspeakers are protected against damage from turn-on "pops" and surges.

#### Separate Power Supplies —

Channels are completely isolated. No power loss or other interactions from simultaneous operation of both channels.

**Crossover Notch** — These sharp switching discontinuities have been virtually eliminated in the Marantz Circuit, even at 20,000 Hz. This results in noticeably cleaner performance, especially apparent at normal listening levels.

**Front Panel** — Matches those of Marantz Model 7T Solid-State Stereo Preamplifier Console and Model 10B Stereo FM Tuner in both size and type of finish. Cabinet or rack mounting available at extra cost.

#### Electronic Time Delay Circuit —

This mutes the signal to the loudspeaker for about five seconds after the unit is turned on, *thus* eliminating the irksome "popping" noise normally produced at that time by high power supply transistorized units.

#### SPECIFICATIONS

##### Power Output Each Channel:

70 watts @ 4 ohms; 60 watts @ 8 ohms; 40 watts @ 16 ohms. Will operate *continually at full rated power from 20 to 20,000 Hz with complete safety!*

##### Frequency Response:

Within 1 db, 10 to 60,000 Hz.

**Damping Factor:** Greater than 30 with 8-ohm load.

#### Total Harmonic Distortion:

Less than 0.1% at and below rated power, 20 to 20,000 Hz.

#### Typical Harmonic Distortion:

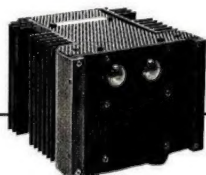
0.03% with 8-ohm or higher load — at full rated output, any frequency from 20 to 20,000 Hz. Distortion decreases as output level is lowered.

**Total Noise:** Better than 90 db below 60 watts into 8 ohms.

**Optional Accessories** — Oiled walnut cabinet, \$29.50; Rack Mount Panel, \$35.00.

**UL Listed** — for 50-60 Hz, 105-130V AC.

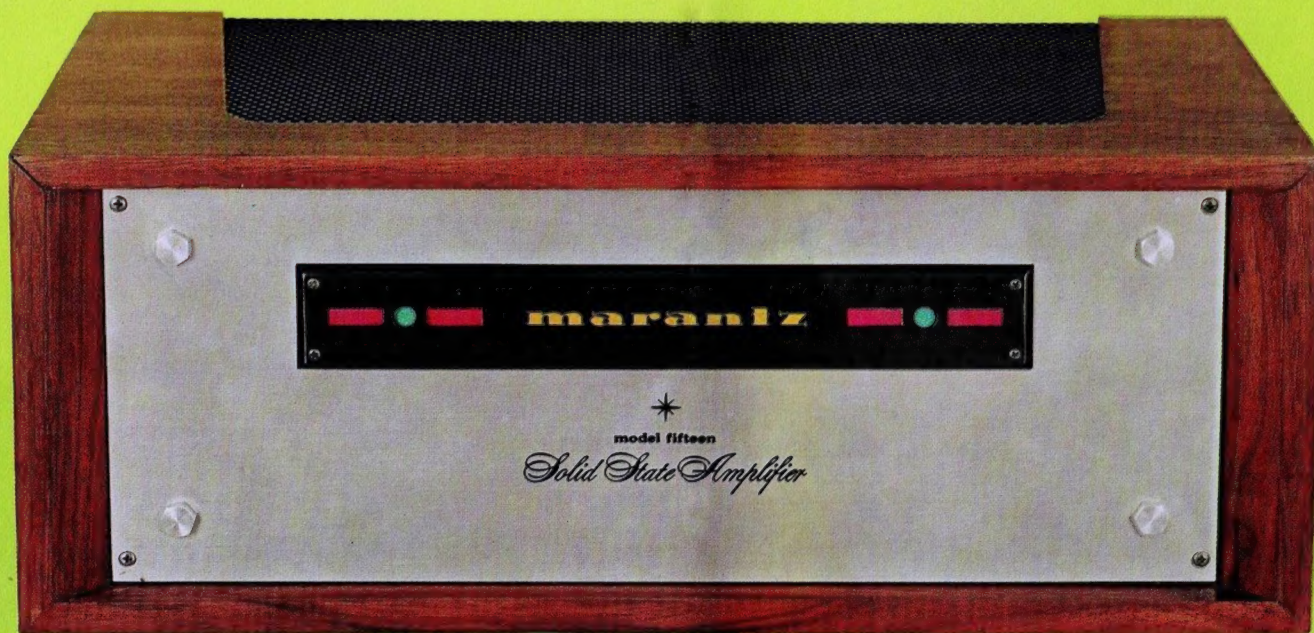
**Easily Convertible** — From 110 volt to 220 volt operations. Please write for conversion instructions.



The Model 14 Single Channel Amplifier

**Marantz Model 15**







**The Model 10B Stereo Tuner.** "We have never seen a tuner to compare with it...so outstanding that it is literally in a class by itself." Thus did *HiFi/Stereo Review* praise the Model 10B Stereo FM Tuner. They were not alone. In fact, no other single audio component has received such unqualified acclaim. Here is the tuner that many radio stations install to monitor their own broadcasts for quality, frequency accuracy, and channel separation. Here is the only FM tuner available which provides stereo separation in excess of 30 db across the *entire* audio frequency spectrum as specified by the Federal Communications Commission. Possession of a Model 10B is the hallmark of the true audio connoisseur. You can receive FM stereo broadcasts with the same clarity and fidelity with which they are transmitted. The Model 10B meets your every requirement for true high fidelity FM stereo reception. Performance characteristics of the Model 10B in regard to quieting, stereo separation and distortion are totally without precedent. Combining high sensitivity, ultra-sharp selectivity, fast quieting action and reduced susceptibility to multipath effects, assures unsurpassed reception—even in fringe areas. The exclusive, built-in oscilloscope (CRT), guarantees absolute tuning accuracy. The oscilloscope also shows correct antenna direction for best reception and tuning out of multipath interference, as well as the relative signal strength of each station. The CRT also lets you test for optimum stereo separation, and for stereo phasing. The Model 10B never requires costly realignment in the IF stage—the units are factory-sealed, and can never go out of adjustment. The advanced features and performance specifications of the Model 10B will satisfy the most technically oriented hi-fi buff—and its simplicity of operation is designed to attract the listener who is simply a lover of good music and desires to own only the very finest equipment available. \$750.00.



## FEATURES

**RF Section**—The precision tuning capacitor has a "linear frequency" characteristic so that the station calibrations appear evenly and accurately spaced along a full 10" tuning dial. RF stages are balanced-tuned throughout. An important feature is the radar-type, balanced-bridge diode mixer.

**IF SECTION**—The unique Marantz IF circuit is based on the development of an "18-pole" phase-linear filter. The ideal characteristics of the filter passband permit performance improvements which are unobtainable with conventionally coupled circuits. Phase-linearity in the 200 KHz passband eliminates a major source of high frequency distortion and loss of separation. 108 db/octave cutoff slopes make the Model 10B the most selective FM tuner in existence. The strongest signals have no deteriorating effect on its ideal passband characteristics. IF alignment is permanent, being unaffected by tube changes or normal aging.

**Limiters and Discriminator**—There are nine limiters in the Model 10B using matched pairs of silicon planar diodes. Each IF stage is self-limiting, preventing overload on strong signals, and eliminating the usual need for AGC circuits. Quieting on weak

signals is close to the theoretical threshold, with ultimate quieting in excess of 70 db. The discriminator circuit is extremely linear, ensuring low distortion through the sub-channel range.

**Multiplex**—The highly sophisticated Marantz circuit permits the inclusion of phase correction to maintain proper phase-amplitude relationships. This allows the use of an extremely effective SCA rejection filter without the usual loss of separation at high frequencies. Separation is well in excess of 30 db to 15 KHz. The output filter circuit provides very sharp attenuation of residual sub-channel components above the audio range, eliminating noise and interference from SCA. Precision-gapped ferrite cup-cores or precision toroidal coils are used for all filters. Automatic stereo switching and inter-channel muting are both accomplished by means of ingenious electronically triggered photo-electric circuits.

**Multipath-Tuning Indicator**—In March 1962, Marantz introduced the concept of using an oscilloscope tube as a multipath and tuning indicator in the early prototypes of the Model 10. As each station is tuned, its correct center position on the passband is clearly displayed. Simultaneously, the presence of

multipath becomes visible, making it quite easy to readjust the antenna for best results. A panel switch permits test display of the left and right FM channels, or external signals from tape recorders or phonographs.

## SPECIFICATIONS

**I.H.F. Sensitivity**—2  $\mu$ v or better.

**Quieting Slope**—at least 50 db @ 3  $\mu$ v; 60 db @ 8  $\mu$ v; 70 db @ 25  $\mu$ v.

**Six IF Stages**—Each with 3-pole phase-linear band-pass filter. IF bandwidth, 200KHz. Cutoff slopes, 108 db/octave overall.

**Selectivity Curve**—Adjacent carrier—42 db; alternate carrier—150 db.

**Nine Dynamic Symmetrical-Aperture Limiters**—Full limiting on noise.

**Ultra-Linear Discriminator**—For low distortion through sub-channel range.

**Balanced-bridge Diode Mixer.**

**Automatic Stereo Switching**—Photoelectronic, with indicator light and threshold adjustment.

**Interstation Muting**—Photoelectronic, with defeat switch and threshold adjustment.

**Total Spurious Rejection**—Better than 100 db. Includes images, cross modulation, etc.

**Volume Sensitivity**—10 db maximum (reached @ 0.8  $\mu$ v).

**Harmonic Distortion**—Less than 0.2% @ 15 KHz after de-emphasis, and less than 1% at detector.

**AM Rejection**—At least 70 db @ 80% modulation with all signal levels.

**Separation**—Approximately 45 db average throughout the range. Better than 30 db at 15 KHz.

**Built-in Multipath/Tuning Indicator**—3" oscilloscope tube.

**Tuning Gang**—Military type, silver-plated, four balanced sections, ceramic spacers. Precision calibrated at 10 points.

**Dimensions**—Front panel, 15 $\frac{3}{8}$ " x 5 $\frac{3}{4}$ "; chassis 14 $\frac{3}{8}$ " wide x 15" deep x 6 $\frac{1}{4}$ " high (including feet). Panel dimensions are identical to Model 7T.

**Panel Finish**—Gold anodized, to match Model 7T.

**Shipping Weight**—38 lbs.

**Optional Accessories**—Oiled walnut cabinet, \$37.00; Rack Mount Panel, \$60.00.

**UL Listed**—for 50-60 Hz 105-130V AC operation.

**Easily Convertible**—From 110 volt to 220 volt operation. Please write for conversion instructions.

# Marantz Model 10-B



**The Model 9 70 Watt Amplifier.** Many audio connoisseurs prefer amplifiers with vacuum tube design. If you are among them, and if you are also seeking massive power output, then the remarkable Marantz Model 9 70 Watt Amplifier is the ideal instrument for you. The Model 9 provides 70 watts of power—140 watts peak. Its tremendous power reserves are available to provide flawless amplification of the most demanding signal. The Model 9 performance is also characterized by exceptional stability and low distortion, even under the stringent requirements of the most complex speaker system. The result is a thrilling new experience in sumptuous sound. Scrupulously precision-crafted throughout, this instrument features a complete built-in test section for testing and balancing of output and driver tubes and for adjusting the balance of the driving signal. Test controls include a seven-position test switch and an ultra-accurately calibrated d'Arsonval meter, and five screwdriver adjustments. All these simple adjustments eliminate the need for matched output tubes and assure optimum performance despite normal tube aging. The Marantz Model 9 70 Watt Amplifier—massive power for magnificent sound. \$384.00.

#### **SPECIFICATIONS**

**Power**—70 watts continuous—140 watts peak. Switch for 40 watt triode operation.

**Response**—At full rated power: within 0.1 db, 20 Hz to 20 KHz; within 1 db, 12 Hz to 40 KHz. At ½ watt: within 1 db, 3 Hz to 40 KHz.

**Harmonic Distortion**—At full rated power: less than 0.1% at mid-frequencies, less than 0.33%: 20 Hz and 20KHz.

**I.M. Distortion**—Less than 0.5% at full rated power.

**Hum and Noise**—Better than 90 db below 70 watts.

**Damping Factor**—Greater than 20.

**Output Impedances**—4, 8 and 16 ohms, plus 1 ohm tap for center-speaker connection.

**Construction**—Instrument-type, precision construction throughout. Circuit assembled on rigid heavy-duty terminal board with machined, silver plated turret-terminals. Wiring connections neatly cabled. Silicon diode B+ and bias supplies, with Zener regulation for first stage. Three Sprague type 17D telephone-grade electrolytic capacitors. Oversized transformers for very cool operation. Heavy front panel with precision-machined knobs, precision d'Arsonval meter.

**Controls**—All controls, adjustments and connections, with the exception of the triode switch, are accessible from the front.

**Gain Control**—Isolated by cathode-follower/phase reversal circuit.

**Phase Switch**—For securing correct phase relation (A + B) of phantom center-channel speakers fed by two amplifiers.

**Low Filter**—Subsonic cutoff filter, less than ¼ db at 20 Hz—20 db at 3 Hz.

**Test Switch**—For bias (plate current) readings for each tube. Built-in test signal for dynamic

balance adjustment. Five bias and balance adjustments, as well as all input and output connections, are located under snap-out panel.

**Tube Complement**—2—6DJ8/ECC88, 1—6CG7, 4—6CA7/EL34, 1 Zener diode, 5—silicon rectifiers.

**Overall Dimensions**—15⅝" wide x 8¼" high x 10½" deep. Panel—15⅝" wide x 7¾" high.

**Shipping Weight**—60 lbs.

**Optional Accessory**—Rack Mount Panel, \$36.00.

**UL Listed**—50 to 60 Hz operation at 105-130 Volts.

**Marantz Model 9**







**The Model SLT-12U Straight Line Tracking Turntable.** Reproducing the total signal and achieving maximum channel separation has always been a problem with conventional tracking tone arms since the introduction of stereo discs. Marantz has solved this problem with the new SLT-12U Universal Cartridge Straight Line Tracking Turntable. After the original recording is taped, it is necessary to create from it a master disc, which is used to mass manufacture the discs you purchase. This stereo master disc is cut with a special lathe, which is controlled by signals from the original tape recording. The cutting head of this lathe travels across the master disc in a straight line, and the grooves are cut proportionately to the volume of the sound fed to it from the tape; as the sound ebbs, the grooves narrow—as the sound swells, they become wider. Thus, both the width of the grooves (shown highly-magnified below) and their depth (pictured below) vary proportionately with the amount of sound fed by the tape, and also with the higher and lower frequencies of the sound. Each side of the groove carries a separate signal—one for each channel. It is the two sides of each groove together that comprise the total stereo signal being recorded. The grooves of the master reproduction disc—and those of all discs subsequently pressed from the master—carry the *total sound originally recorded*. In order to reproduce the *total sound originally recorded*, the playback tone-arm and cartridge must duplicate *exactly* the straight line path of the cutting head and the angle of the cutting stylus. This is exactly what the Marantz SLT-12U tone-arm does. *It tracks across the disc in a straight line*, following the path originally taken by the master disc cutting head—as you can easily see in the multiple-exposure photo below. A conventional tone-arm creates an arc in its travel across the disc; because there is no arc created, the cartridge stylus mounted in the SLT-12U arm cannot twist in the groove. Its angle *exactly* duplicates the angle of the cutting stylus, remaining always tangent to, and precisely seated in, the groove. To our knowledge, it is the only disc playback system which *can and does exactly* reproduce the total dynamics and full stereo separation of the *total sound that was originally recorded*. There are certain deficiencies which are inherent in conventional tone-arm tracking. Many manufacturers have devised ingenious methods to combat some of these deficiencies, but they are compromises at best. These deficiencies do not exist in the Marantz Straight Line Tracking Turntable. Marantz has perfected a trouble-free tracking and tone-arm assembly. With the magnificent Marantz SLT-12U disc playback system there is: no tracking error; no inner-groove distortion; no skating impulse; no deterioration of the elliptical stylus shape; absolutely uniform stereo separation and frequency response, from outermost to innermost grooves. The Marantz SLT-12U will accommodate virtually all existing, current or future cartridge weighing up to 10 grams (most current cartridges weigh five grams or less) and up to ¾" height from the top of the cartridge to the stylus tip (most current cartridges are only 50% of this height). Installation is non-technical, and can be performed easily. To make universal cartridge selection possible, the SLT-12U tone-arm is equipped with a unique positive balancing device that permits simple balancing for any of the popular cartridges. The Marantz SLT-12U is not just a theory in practice—it is a proven product and it creates a truly great experience in musical enjoyment. \$295.00.



## FEATURES

### **Zero Tracking Error—**

Revolutionary straight line tracking arm holds stylus tangent to record groove at all times, eliminates inner groove tracking error distortion, skating force and uneven stylus wear—all inherent in conventional arm design.

**Rumble Free**—12 lb. heavy-weight precision-machined turntable, tungsten carbide

thrust bearing, and precision ground drive belt combine to provide maximum isolation from acoustic feedback.

### **Widest Dynamic Range—**

Marantz designed lightweight low mass arm produces finest tone quality and an unprecedented dynamic range.

**Cueing Control**—No need to ever touch pick-up arm. Positive cueing control automatically places arm in desired

groove-track, eliminating accidental scratching and damaging of prized recordings.

## SPECIFICATIONS

**Speeds**— $33\frac{1}{3}$  and 45 R.P.M.

**Flutter and Wow**—Better than 0.04%.

**Tracking Error**—Non-existent (0 degrees/inch).

**Skating Force**—Non-existent when turntable is properly leveled.

**Drive Principle**—Hysteresis

synchronous motor belt (uscothane belt) driving the platter's outer rim.

**Rumble**—Virtually non-existent.

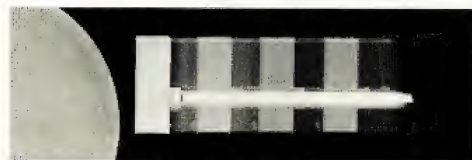
**Leveling**—Precision bubble-level adjustment.

**Dimensions and Weight**—18" wide x 14" deep x 6½" high (including walnut base); 27 lbs.

**Power Requirements**—120V, 60 cycles (50 cycles available).

**UL Listed.**

**Optional Accessory**—Dust cover.



Tracking Arm Multiple Exposure



Groove Depth



Groove Width

# Marantz Model SLT-12U





**The Model 18 Solid-State Stereophonic FM Receiver.** Now – the eloquent “Sound of Marantz” components in a single unit. In the Model 18 – Marantz introduces, for the first time, a solid-state FM Stereo Multiplex Tuner, Stereo Preamplifier and Stereo power amplifier – all combined on a single chassis. Styled in sleek, elegant lines, it is an “FM stereo sound center” that will fill your home with stunning experiences in stereophonic listening. The Model 18 features outstanding stereo control flexibility not normally found in a complete receiver. In addition to separate bass and treble controls for each channel, there are inputs for two stereo tape recorders (one in the rear for permanent connection, and one in front for tape dubbing from an external recorder), two inputs for stereo phonographs, a stereo headphone output, a switch for selection of multiple speaker system combinations, plus a multitude of other switching and control conveniences. With the Model 18 you not only enjoy the traditional unsurpassed quality and flexibility of Marantz components, but also inspired innovation in circuitry design – which provides cleaner sound than you’ve ever heard before. Weak FM stations are received without being *swamped* out by strong stations, and powerful stations are received without distortion. It is now easy to “lock in” tightly on one station closely adjacent to another without fear that the adjacent station will interfere with the one you want. The Model 18 attains this sharp selectivity through the use of modified Butterworth filters that couple the four amplifiers in the IF stages. Absolute tuning accuracy through the built-in oscilloscope is an exclusive feature of Marantz tuners. The oscilloscope also indicates correct antenna direction for best reception and tunes out multipath interference, as well as tuning to the maximum signal strength of each station. The oscilloscope can also be used to test for optimum stereo separation and stereo phasing of all components connected to the Model 18. Selecting the proper station becomes a delightful experience with the unique silky-smooth “Gyro-Touch” tuning control (patent applied for), through which you tune by *turning the actual flywheel itself*. Mounted horizontally, the flywheel tunes in the direction you are seeking. Solid-state throughout, the amplifier sections are rated at 40 watts rms continuous per channel (80 watts peak) all the way from 20 Hz to 20,000 Hz. Other features of the amplifier section include direct coupled design to provide instantaneous overload recovery. There is an exclusive automatic protection circuit incorporated for both the amplifier components and speaker systems. Flawless performance was the engineering objective – flawless performance is the final result. \$695.00.









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*Receiver*

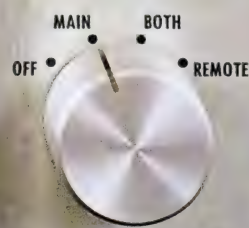
▲ Hi Blend    ▲ Lo Filter    ▲ Hi Filter    ▲ Muting Off



bass



treble



speaker systems



STEREOPHONES



## Features:

**Variable-Overlap Drive:** This exclusive Marantz circuit eliminates the irritating cross-over notch distortion found in most solid state amplifiers. In addition, the Variable-Overlap Drive circuit *automatically compensates for the aging of the amplifier's components, resulting in years of "like new" performance.*

**Relay-Operated Protective Device:** The presence of frequencies below 8 Hz at the amplifier input, if of excessively high level, will trigger this protective circuit, preventing damage to the output transistors, power supply, and speakers. In addition, this device acts as a time delay when the amplifier is turned on, allowing the circuits to stabilize and preventing high-level power surges from damaging the speakers. Since no transient power surges are permitted to reach the speakers, the thumps and pops frequently encountered with solid state amplifiers when they are turned on or off, have been eliminated.

**Amplifier Delivers 200 Watts RMS:** Marantz measures power by the only *reliable* method—RMS power. Marantz 200 watts sounds more powerful than 600 watts Music Power because Marantz power is delivered throughout the entire audio spectrum, from 20 Hz to 20 kHz (both channels driven), *at or below the rated distortion.*

**Complete Stability Regardless of Load:** The Model 16 maintains full stability while driving reactive and/or capacitive loads such as electrostatic speakers.

**Separate Power Supplies for Each Channel:** The Model 16 is actually two identical 100 watt amplifiers mounted on a single front panel. The use of separate power supplies ensures infinite isolation of left and right channels. Each channel can develop full power, and overload of one channel cannot affect the performance of the other.

**Direct Coupled Complimentary-Symmetry Transistor Circuitry:** Provides maximum gain with minimum distortion.

**Integrated Circuit Operational Amplifier:** Is primarily responsible for the extremely low noise and extended frequency response of the Model 16.

**Massive Heat Sinks:** Are capable of dissipating far more heat than the output transistors will produce under any condition.

**Current-Limiting Circuits:** Prevent damage to speakers and output transistors.

**Instant Overload Recovery:** Restores normal operation immediately and automatically as soon as an overload condition at the amplifier input is corrected.

**Etched Front Panel:** Mounts beautifully in custom furniture and keeps its handsome appearance for years.

## Specifications:

### AMPLIFIER SECTION:

#### Power Output:

*Total RMS continuous power, both channels driven, at rated distortion, 20 Hz to 20 kHz.*

200 Watts into 8 ohm (100 watts/channel); 200 Watts into 4 ohms (100 Watts/channel); 100 watts into 16 ohms (50 watts/channel).

When measured by I.H.F. or E.I.A. standards, the following specifications would be the equivalent power output to the above scientific Marantz RMS continuous ratings:

I.H.F. Total Music Power

300 Watts into 8 ohms

Music Power  $\pm 1$  dB

400 Watts into 8 ohms,

E.I.A. Peak Power

600 Watts.

#### Total Harmonic Distortion:

At or below rated power, 20 Hz to 20 kHz, less than 0.1%

**Intermodulation Distortion:**  
At or below rated Power, less than 0.1%

#### Frequency Response:

+0, -3 dB, 3 Hz to 90 kHz  
 $\pm 0.25$  dB, 20 Hz to 20 kHz

#### Total Noise:

Better than 90 dB below rated power into 8 ohms

#### Input Sensitivity:

1 volt for rated power

#### Input Impedance:

47K ohms

#### Damping Factor:

Greater than 100 at 8 ohms

#### Number of Semi-Conductors:

2 I.C.'s

28 Transistors

16 Diodes

#### Power Requirements:

120 volts AC, 300 Watts, 50/60 Hz  
220V. optional on special order

#### Dimensions:

15 $\frac{3}{8}$ " W x 5 $\frac{3}{4}$ " H x 8" D

Unit Weight: 30 lbs.

Shipping Weight: 36 lbs.

#### Optional Accessories:

Walnut Cabinet WC-2

Rack Panel Kit RPK-16

70 Volt Line Matching

Transformer LT-70

Also Available:

Model 16M: 100 Watt

Monophonic Power

Amplifier

## MARANTZ WARRANTY

The makers of Marantz fine audio equipment demonstrate their confidence in their product by providing a warranty far better than industry standards. The owner of Marantz equipment knows that the performance and reliability he buys will be his for years to come.

This instrument is warranted under the conditions outlined below to its original, registered owner, provided the purchase was made from a franchised Marantz dealer and that the Warranty Registration Card is submitted to Marantz Company within ten days from date of purchase.

This instrument is warranted to remain free from operating defects for three years from the date of purchase. In the event that service is required, all necessary parts and labor will be furnished free of charge during this period.

This warranty is void if the serial number has been altered, removed or defaced. The warranty is void if the instrument is altered, misused, mishandled, maladjusted—in any way that Marantz believes has affected the stability or reliability of

the instrument—or is serviced by any parties not authorized by the Marantz Company. This warranty shall not apply if the instrument has not been connected or operated in accordance with the instructions furnished by Marantz. This warranty does not include any transportation costs incurred because of the need for service, unless a special agreement is provided in writing by the Marantz National Service Manager. Ordinary periodic check-ups are not included in this warranty.

Marantz reserves the right to make changes in design and improve upon its products without any obligation to install these improvements in any of its products previously manufactured.

THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR SUITABILITY FOR PURPOSE NOR ARE THERE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE FACE HEREOF.

**marantz**  
P.O. Box 99, Sun Valley, California 91352



## FEATURES

**Built-in Oscilloscope**—This displays incoming signals for precise tuning, strength of signal, correct antenna orientation for minimum multipath distortion and station modulation. It may also be used for observing the degree of stereo separation, stereo phasing of all stations and other components connected through the Model 18 Receiver.

### **Butterworth Filters**—

Incorporated in the IF stages these assure better selectivity, lower distortion, and more than 30 db stereo separation, even at 15 KHz. The IF stages never require realignment.

**Gyro-Touch Tuning** (patent applied for)—Selecting stations becomes a delightful experience with this unique control in which you rotate the actual tuning flywheel. This results in silky-smooth, ultra-low friction tuning action.

**Direct Coupled—Design and Protection Circuits** (patent applied for)—Through these, the amplifiers recover instantaneously from overload. They also protect both amplifiers and loudspeakers against sustained overload damage

caused by short circuits or other accidental misuse.

**Front Panel Tape Recorder Dubbing Connection**—These provide convenient facilities for making tape copies with an external recorder.

**Front Panel Headset Output**—You can listen to stereo headsets with or without the loudspeakers playing.

**Longer Dial**—Because the tuning dial is longer than on most receivers, you can more accurately "zero in" on a given station.

**1% Resistors Used**—The best resistors available, they give supremely low noise. They are used throughout the receiver in all vital circuits.

**Massive Heat Sinks**—These dissipate heat from the power transistor circuits, and that means longer years of use.

**Electronic Time Delay Circuit**—This mutes the signal to the loudspeaker for about five seconds after the unit is turned on, thus eliminating the irksome "popping" noise normally produced at that time by high power supply transistorized units.

## SPECIFICATIONS

### AUDIO SECTIONS

**Rated Continuous**—(RMS power output, per channel, both channels operating simultaneously, 20 Hz to 20,000 Hz).  
4 and 8 ohms = 40 watts,  
16 ohms = 20 watts.

**I.M. Distortion**—(SMPTE) at or below rated power = 0.2% max.

**Total Harmonic Distortion**—20 to 20,000 Hz, at or below rated power = 0.2% max.

**Power Bandwidth**—0.2% total harmonic distortion—10 Hz to 30,000 Hz.

**Frequency Response**—\*20 Hz to 20,000 Hz  $\pm 1/2$  db (high level) RIAA  $\pm 0.5$  db (phono).

**Input Sensitivity**—(For 40 watts @ 8 ohms) 100 mv @ (high level), 1 mv @ (phono).

**Input Impedance**—100,000 ohms (high level), 47,000 ohms (phono).

**Hum and Noise**—Below 40 watts, 8 ohms: -80 db (high level), 1  $\mu$ v equiv. input (phono).

**Damping Factor**—30 minimum at 8 ohms.

**Stability**—Unconditional.

**Separation and Crosstalk**—Minimum 35 db from 20 to 20,000 Hz.

\*IHF specifications are only from 20 to 20,000 Hz. The frequency response of the Model 18 is far wider than the IHF range.

### FM SECTION

**Noise Quieting**—-50 db @ 5  $\mu$ v; -60 db @ 10  $\mu$ v; -70 db @ 50  $\mu$ v.

**Total Harmonic Distortion**—0.2% max. 400 Hz, 100% Mod.

**Frequency Response**—75  $\mu$ sec DE-EMP  $\pm 0.5$  db.

**Multiplex Separation**—40 db @ 20 Hz; 45 db @ 1 KHz; 31 db @ 8 KHz; 30 db @ 15 KHz.

**38 KHz Suppression**—60 db.

**67 KHz Suppression**—65 db.

### PHYSICAL MEASUREMENTS:

**Dimensions**—18 $\frac{1}{4}$ " wide x 16" deep x 6" high (including feet).

**Front Panel Dimensions**—18 $\frac{1}{4}$ " wide x 5 $\frac{3}{4}$ " high.

**Shipping Weight**—46 lbs.

**Shipping Weight of Accessory Cabinet**—11 lbs.

**Optional Accessories**—Oiled walnut cabinet, \$39.50.

**UL Listed**—for 50-60 Hz, 105-125V AC.

**Easily Convertible**—From 120 Volt to 240 Volt operation.







**The Imperial I and Imperial II Speaker Systems.** Before Marantz undertakes to create any high-fidelity component, we must take into consideration a most awesome responsibility: the product must be the finest in the world. That is the tradition of Marantz. Thus we did not step lightly into our task of designing speakers worthy of bearing the Marantz name. The Imperial speakers represent the culmination of a long, hard look at the state of the art by Marantz audio and acoustical engineers and master interior and furniture designers. Just as important were the professional musicians, thoroughly knowledgeable in the audio field, who inspired, guided, and approved every phase of the creation of this masterpiece. The result—in keeping with the Marantz tradition—is as perfect a speaker system as modern technology will allow. Available in two enclosure styles, the Imperial features a three-way design incorporating five speakers: a 12" Quadlinear woofer, a pair of mid-range drivers, and a pair of high-frequency reproducers. The unique Quadlinear woofer has an exclusive four-magnet design for critical control of flux distribution in the voice-coil gap. The result is absolutely linear travel of the voice coil, ensuring unmatched transient response and eliminating speaker deterioration. Separate "Brilliance" and "Presence" controls are built in for acoustical balancing. Hear and compare the Marantz Imperial with speaker systems costing twice as much! Your ears will convince you that Marantz' long-awaited entry into the speaker field was worth waiting for! Imperial I, \$299.00. Imperial II, \$369.00.

#### **IMPERIAL I FEATURES**

The Imperial I is an elegant piece of furniture as well as an unmatched stereo component. It is meticulously crafted in walnut with a hand-rubbed French-Lacquer finish. Even the decorator-designed grille fabric is a rich complement to the warmth and solidity of the specially selected walnut.

#### **IMPERIAL II FEATURES**

The Imperial II is the quintessence of the cabinet-maker's art, a paragon in the rich solidity of the finest hardwoods. Just as its sound earns a place in an incomparable Marantz system, so does its beauty and craftsmanship rank it with decorative elegance. Antique distressed finish frames the excitement of a hand-carved wood grille.

#### **IMPERIAL I & II SPECIFICATIONS**

**System:** 3-way, 5-speaker

**Frequency Range:** 40 Hz to 20 KHz

**Power Handling:** 40 watts

**Impedance:** 8 ohms

**Crossover Frequencies:** 700 Hz and 6 KHz

**Dimensions:** 22" W x 26" H x 15" D

Two, separate, precision balance controls for "Brilliance" and "Presence."